

WHAT IS CLAIMED IS:

1. An image processing apparatus, comprising:
first transfer means for generating a print ID
corresponding to an input image data on which a forgery
preventing process has been performed, and transferring
5 the print ID to an image data recording device;

print control data generating means for encrypting
the image data using a common key transmitted from said
image data recording device, representing the data as a
10 print control command, and generating print control
data; and

second transfer means for transferring the print
control data and the print ID to said image data
recording device.

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2. An image processing apparatus, comprising:
image process means for performing an image
process including a forgery preventing process on input
image data;

20 print ID generating means for generating a print
ID corresponding to the image data on which said image
process means has performed the forgery preventing
process;

first transfer means for transferring the print ID
25 generated by said print ID generating means to an image
data recording device;

encryption means for encrypting the image data on

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which said image process means has performed a predetermined process using a common key transmitted from said image data recording device;

print control data generating means for generating
5 print control data by converting the print image data encrypted by said encryption means into a print control command; and

second transfer means for transferring the print control data generated by said print control data
10 generating means and the print ID generated by said print ID generating means to said image data recording device.

3. The apparatus according to claim 2, wherein
15 said encryption means performs an encryption process using a conversion table generated using the common key.

4. An image data recording device, comprising:
20 common key generating means for generating a common key based on a print ID transferred from an image data processing device;

management means for managing the common key generated by said common key generating means and the
25 print ID transferred from said image data processing device;

common key issue means for transmitting the common

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common key obtaining means for obtaining the common key corresponding to the print ID from said management means when the print ID and print control data are transmitted from said image data processing device;

analyzing means for extracting encrypted print
image data by analyzing a command of the print control
10 data using the common key obtained by said common key
obtaining means;

decryption means for decrypting the print image data extracted by said analyzing means using the common key obtained by said common key obtaining means; and
15 print means for recording the print image data decrypted by said decryption means in a recording medium.

5. The apparatus according to claim 4, wherein
20 said common key generating means generates the
common key without regularity independent of a value of
the print ID.

25 6. The apparatus according to claim 4, wherein
 said decryption means performs a decryption
 process using a conversion table generated using the
 common key.

7. An image data recording system, comprising:

an image data processing device: comprising:

5 first transfer means for generating a print ID corresponding to an input image data on which a forgery preventing process has been performed, and transferring the print ID to an image data recording device;

10 print control data generating means for encrypting the image data using a common key transmitted from said image data recording device, and representing the data as a print control command; and

15 second transfer means for transferring the print control data represented as the print control command and the print ID to said image data recording device; and

an image data recording device, comprising:

common key generating means for generating a common key based on the print ID transferred from said image data processing device;

20 management means for managing the common key generated by said common key generating means and the print ID transferred from said image data processing device;

25 common key issue means for transmitting the common key generated by said common key generating means to said image data processing device;

common key obtaining means for obtaining the

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common key corresponding to the print ID and print control data transmitted from said image data processing device from said management means;

analyzing means for extracting encrypted print image data by analyzing a command of the print control data using the common key obtained by said common key obtaining means;

decryption means for decrypting the print image data extracted by said analyzing means using the common key obtained by said common key obtaining means; and

print means for recording the print image data decrypted by said decryption means on a recording medium.

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8. An image data recording system, comprising:
an image data processing device, comprising:

image process means for performing an image process including a forgery preventing process on input image data;

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print ID generating means for generating a print ID corresponding to the image data on which said image process means has performed the forgery preventing process;

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first transfer means for transferring the print ID generated by said print ID generating means to an image data recording device;

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encryption means for encrypting the image data on which said image process means has performed a predetermined process using a common key transmitted from said image data recording device;

5 print control data generating means for generating print control data by converting the print image data encrypted by said encryption means into a print control command; and

10 second transfer means for transferring the print control data generated by said print control data generating means and the print ID generated by said print ID generating means to said image data recording device; and

an image data recording device, comprising:

15 common key generating means for generating a common key based on the print ID transferred from said image data processing device;

20 management means for managing the common key generated by said common key generating means and the print ID transferred from said image data processing device;

common key issue means for transmitting the common key generated by said common key generating means to said image data processing device;

25 common key obtaining means for obtaining the common key corresponding to the print ID and print control data transmitted from said image data

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processing device from said management means;

analyzing means for extracting encrypted
print image data by analyzing a command of the print
control data using the common key obtained by said
5 common key obtaining means;

decryption means for decrypting the print
image data extracted by said analyzing means using the
common key obtained by said common key obtaining means;
and

10 print means for recording the print image
data decrypted by said decryption means on a recording
medium.

9. A method for controlling an image data
15 recording system having an image data processing device
and an image data recording device, comprising the
steps of:

in the image data processing device
performing a first transfer process by
20 generating a print ID corresponding to an input image
data on which a forgery preventing process has been
performed and transferring the print ID to an image
data recording device; generating print control data by
encrypting the image data using a common key
25 transmitted from said image data recording device and
representing the data as a print control command; and
performing a second transfer process by transferring

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the print control data represented as the print control command and the print ID to said image data recording device; and

in the image data recording device

5 generating a common key based on the print ID transferred from said image data processing device; managing through management means the common key generated in said common key generating process and the print ID transferred from said image data processing device; performing a common key issue process by
10 transmitting the common key generated in said common key generating process to said image data processing device; obtaining the common key corresponding to the print ID and print control data transmitted from said
15 image data processing device from said management means; extracting encrypted print image data by analyzing a command of the print control data using the common key obtained in said common key obtaining process; decrypting the print image data extracted in
20 said analyzing process using the common key obtained in said common key obtaining process; and performing a printing process by recording the print image data decrypted in said decryption process on a recording medium.

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10. A method for controlling an image data recording system having an image data processing device

and an image data recording device, comprising the steps of:

in the image data processing device

performing an image process including a
5 forgery preventing process on input image data;
generating a print ID corresponding to the image data
on which said image process has performed the forgery
preventing process; performing a first transfer process
by transferring the print ID generated in said print ID
10 generating process to an image data recording device;
encrypting the image data on which said image process
has performed a predetermined process using a common
key transmitted from said image data recording device;
generating print control data by converting the print
15 image data encrypted in said encryption process into a
print control command; and performing a second transfer
process by transferring the print control data
generated in said print control data generating process
and the print ID generated in said print ID generating
20 process to said image data recording device; and

in the image data recording device

generating a common key based on the print ID
transferred from said image data processing device;
managing through management means the common key
25 generated in said common key generating process and the
print ID transferred from said image data processing
device; performing a common key issue process by

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transmitting the common key generated in said common
key generating process to said image data processing
device; obtaining the common key corresponding to the
print ID from said image data processing device and
5 print control data from said management means;
extracting encrypted print image data by analyzing a
command of the print control data using the common key
obtained in said common key obtaining process;
decrypting the print image data extracted in said
10 analyzing process using the common key obtained in said
common key obtaining process; and performing a printing
process by recording the print image data decrypted in
said decryption process on a recording medium.

15 11. A computer-readable storage medium storing a
program for directing an image data recording system
having an image data processing device and an image
data recording device, said program comprising:

20 a first transfer process by generating a print ID
corresponding to an input image data on which a forgery
preventing process has been performed, and transferring
the print ID to an image data recording device;

a print control data generating process by
encrypting the image data using a common key
25 transmitted from said image data recording device, and
representing the data as a print control command;

a second transfer process by transferring the

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print control data represented as the print control command and the print ID to said image data recording device;

5 a common key generating process based on a print ID transferred from said image data processing device;

a managing process by managing through management means the common key generated in said common key generating process and the print ID transferred from said image data processing device;

10 a common key issue process by transmitting the common key generated in said common key generating process to said image data processing device;

15 a common key obtaining process by obtaining a common key corresponding to the print ID and print control data transmitted from said image data processing device from said management means;

20 an analyzing process by extracting encrypted print image data by analyzing a command of the print control data using the common key obtained in said common key obtaining process;

a decryption process by decrypting the print image data extracted in said analyzing process using the common key obtained in said common key obtaining process; and

25 a printing process by recording the print image data decrypted in said decryption process on a recording medium.

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12. A computer-readable storage medium storing a program for directing an image data recording system having an image data processing device and an image data recording device, said program comprising:

5 an image processing process including a forgery preventing process to be performed on input image data;

 a print ID generating process performed corresponding to the image data on which said image process has performed the forgery preventing process;

10 a first transfer process by transferring the print ID generated in said print ID generating process to an image data recording device;

 an encryption process by encrypting the image data on which said image process has performed a
15 predetermined process using a common key transmitted from said image data recording device;

 a process of generating print control data by converting the print image data encrypted in said encryption process into a print control command; and

20 a second transfer process by transferring the print control data generated in said print control data generating process and the print ID generated in said print ID generating process to said image data recording device;

25 a common key generating process based on the print ID transferred from said image data processing device;

 a managing process of managing through management

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5 a common key issue process by transmitting the
common key generated in said common key generating
process to said image data processing device;

an analyzing process by extracting encrypted print image data by analyzing a command of the print control data using the common key obtained in said common key obtaining process;

a printing process by recording the print image
20 data decrypted in said decryption process on a
recording medium.

25 performing an image process including a forgery
preventing process to be performed on input image data;
generating a print ID corresponding to the image

data on which said forgery preventing process has been performed;

transferring the generated print ID to an image data recording device;

5 encrypting the image data on which a predetermined process has been performed in said image processing step using a common key transmitted from said image data recording device;

10 generating print control data by converting the encrypted print image data into a print control command; and

transferring the generated print control data and the generated print ID to said image data recording device.

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14. A method for controlling an image data recording device, comprising the steps of:

generating a common key based on a print ID transferred from an image data processing device;

20 managing the generated common key and the print ID transferred from said image data processing device;

transmitting the generated common key to said image data processing device;

25 obtaining the common key corresponding to the print ID when the print ID and print control data are transmitted from said image data processing device;

extracting encrypted print image data by analyzing

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a command of the print control data using the obtained common key;

decrypting the extracted print image data using the obtained common key; and

- 5 recording the decrypted print image data in a storage medium.

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